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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,453	02/17/2004	Shinsuke Nakanishi	5259-000039	3019
27572	7590	10/28/2005		
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				
			EXAMINER WHITTINGTON, KENNETH	
			ART UNIT 2862	PAPER NUMBER

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/780,453	Applicant(s) NAKANISHI ET AL.	
	Examiner Kenneth J. Whittington	Art Unit 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



**Bot Leaynh
Primary Examiner**

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/17&9/7/04,8/1/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Abstract

Applicant is reminded of the proper language and format for an abstract of the disclosure.

6 The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

12 The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

18 The abstract of the disclosure is objected to because it contains terms that can be implied, i.e., "is disclosed" on line 1. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the

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invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayes (US 6,529,006). Regarding claims 1-3, Hayes discloses and method and apparatus comprising:

12 a first electromagnetic signal receiving section which receives an electromagnetic signal originating from alternating current flowing through a metallic wire which is integrated or attached to a cable which is the subject of determination (See Hayes FIGS. 2a and 3, wire 22 with current and detectors 21 and 23);

18 a second electromagnetic signal receiving section whose position in a horizontal plane is different from a position in the horizontal plane of the first electromagnetic signal receiving section and which receives the electromagnetic signal (See FIGS. 2a and 3, item 20);

24 a GPS location data acquiring section which acquires location data including latitude and longitude of a predetermined location with respect to the apparatus itself (See col. 8, lines 8-14);

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a display section for displaying information relating to the location of the cable based on data from the calculations sections (See FIG. 3, item 10); and

a first location calculation section which calculates location data of the cable which is the subject of determination
6 when taking the predetermined location as a standard using the electromagnetic signal received by the first electromagnetic signal receiving section and the electromagnetic signal received by the second electromagnetic signal receiving section, and which calculates the depth of the cable which is the subject of determination using the calculated location data (See col. 7,
12 lines 19-65); and

a second location calculation section which calculates plane location data of the cable which is the subject of determination using the location data acquired by the location data acquiring section and the location data calculated by the first location calculation section (See col. 7, lines 19-65 and
18 col. 8, lines 8-14).

Regarding claims 4 and 5, Hayes discloses a processing section which comprises a program for operating the apparatus having steps performed by the GPS acquiring sections, the first location section and the second location sections in the manner

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and having the features as cited above (See FIG. 1, item 9 and col. 7, lines 9-65).

Conclusion

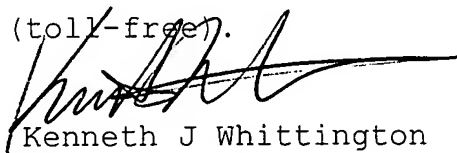
The prior art made of record and not relied upon is
6 considered pertinent to applicant's disclosure. The cited prior art discloses various designs for methods and apparatus for locating current carrying items in the ground.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Kenneth
12 J. Whittington whose telephone number is (571) 272-2264. The examiner can normally be reached on Monday-Friday, 7:30am-4:00pm.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, Edward Lefkowitz can be
reached on (571) 272-2180. The fax phone number for the
18 organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kenneth J Whittington
Examiner
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